

phoenix 5 - to help men and their companions overcome issues created by prostate cancer

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The Prostate Basics Menu



Metastasis or "mets": How Cancer Spreads

metastasis (meh-TAS-ta-sis): The spread of cancer from one part of the body to another. Tumors formed from cells that have spread are called "secondary tumors" and contain cells that are like those in the original (primary) tumor. The plural is metastases.

(further resources at the end of this article)

Tumors are called "malignant" because they have the ability to invade normal tissues (replacing healthy cells with cancer cells) and to metastasize (spread) to other parts of the body. Death from cancer often comes not from the primary site (where the cancer first began) but from the metastases [also known as "mets"]. For example, a patient with stomach cancer may actually die from liver failure after the cancer has spread to that organ.

When a certain type of cancer spreads to another part of the body, it does not change its type. For example, if a person with a lymphoma develops a tumor in the lung which is a metastasis from this lymphoma, the tumor growing in the lung has the same characteristics as the lymphoma. It does not represent a new lung cancer of the type which would develop if the cancer was to start in, or to be "primary" in the lung. It is important to understand this as the treatment that will be effective against the metastasis will be the same treatment that will be used for the primary lymphoma. This is why it is most important for the doctors treating

a patient to be able to establish the primary site at which any cancer originated.

Metastases takes place in many ways: through the lymphatic system, through the bloodstream, by spreading through body spaces such as the bronchi or abdominal cavity, or through implantation.

The most common way for cancer to spread is through the lymphatic system. This process is called "embolization". The lymph system has its own channels that circulate throughout the body, similar to the veins and arteries of the bloodstream. These channel are very small and carry a tissue fluid called lymph throughout the body.

Often when a solid tumor is removed by surgery, the surgeon will remove not only the tumor but the neighboring lymph glands, even though there is no visible sign of cancer in those glands. This is done as a precautionary measure, because if even one cell has broken away from the tumor and lodged in the lymphatic system, the cancer could continue growing and metastasizing.

Cancer can also metastasize through the bloodstream. Cancer cells, like healthy cells, must have a blood supply in order to live, so all cancer cells have access to the bloodstream. Malignant cells can break off from the tumor and travel through the bloodstream until they find a suitable place to start forming a new tumor.

drawing showing how cancer cells can migrate

(Tumors almost always metastasize through the veins rather than through the arteries.) Sarcomas spread through the bloodstream, as do certain types of carcinomas, like carcinoma of the kidneys, testicular carcinoma, and Wilms' tumor, a type of kidney cancer seen in young children. Cancers may spread by more

than one route.

Cancers can also spread by local invasion -- that is, by intruding on the healthy tissue that surrounds the tumor. Some cancers that spread this way do not venture very far from the original site. An example of this kind of cancer is basal cell carcinoma of the skin. When this kind of cancer is removed by surgeon, a wide area of healthy tissue surrounding it is also removed and it is usually "cured" immediately. Unless some cells have been left behind, it is very unlikely that it will recur. (However, it is possible that a second cancer of the same kind may start to grow at a later time at a completely different site -- the new growth having nothing to do with the first.)

A very rare type of metastasis is caused by implantation or inoculation. This can happen accidentally when a biopsy is done or when cancer surgery is performed. In this case malignant cells may actually drip from a needle or an instrument (this is also called a "spill"). It is desirable, therefore, if possible and if the cancer is small to remove it completely at the initial surgery -- that is at the time of the biopsy.

Cancers do not spread in a completely random fashion. Some parts of the body are more vulnerable to becoming metastatic sites than others. For example cancers rarely metastasize to the skin, but they often metastasize to the liver and lungs. Each type of cancer has its own pattern for metastases. See the individual site discussions for further information.

*[Text from the British Columbia Cancer Agency.
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**For another diagrammed view of how cancer
spreads, go to the CaPCure site.**

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